



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

August 05, 2014

WELL WORK PERMIT

Re-Work

This permit, API Well Number: 47-4300518, issued to CHESAPEAKE APPALACHIA, L.L.C., is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.



James Martin
Chief

Operator's Well No: 461
Farm Name: HUNTINGTON DEV & GAS
API Well Number: 47-4300518
Permit Type: Re-Work
Date Issued: 08/05/2014

PERMIT CONDITIONS

West Virginia Code § 22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6-20, which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
2. Pursuant to 35 CSR § 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
3. Pursuant to 35 CSR § 4-19.1.c, if the operator is unable to sample and analyze any water well or spring within one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
5. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours.
7. Well work activities shall not constitute a hazard to the safety of persons.
8. This permit is being conditioned to address the possibility of flooding in the area of this well. Any tanks stored on this location must be securely anchored in cement to prevent the loss of tanks should a flood occur. In addition, cages must be placed around the well head to prevent debris from damaging the well head.

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, DIVISION OF OIL AND GAS
WELL WORK PERMIT APPLICATION

- 1) Well Operator CHESAPEAKE APPALACHIA, L.L.C. 494477557 Lincoln Laurel Hill Branchland, WV
Operator ID County District Quadrangle
- 2) Operators Well Number: 805461 WO 3) Elevation: 1118'
- 4) Well type: (a) Oil or Gas
(b) If Gas: Production Underground Storage
Deep Shallow
- 5) Proposed Target Formation(s): Injun/ Big Lime Proposed Target Depth: 1558' - 1766'
- 6) Proposed Total Depth: 1900' Formation at proposed Total Depth: Slate and Shells
- 7) Approximate fresh water strata depths: Behind Existing Casing
- 8) Approximate salt water depths: 950'
- 9) Approximate coal seam depths: 108'
- 10) Approximate void depths, (coal, Karst, other): None Known
- 11) Does land contain coal seams tributary to active mine? No
- 12) Proposed Well Work: See Attached Well Workover Procedure
- 13) CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	SIZE	GRADE	WEIGHT PER FT.	FOR DRILLING	LEFT IN WELL	FILL-UP (CU.FT.)
Conductor	10"			21	21	Existing Casing
Fresh Water						
Coal	8 1/4"			331	331	Existing Casing
Intermediate	6 5/8"			1579	1579	Existing Casing
Production	4 1/2"	M	9.5		1900	65
Tubing	2 3/8"	J	4.6	AS	NEEDED	
Lining						

PACKERS: Kind Hookwall
Sizes 4 1/2" x 6 1/4"
Depths set Approximately 1900

RAT
07/07/14

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Office of Oil and Gas
JUL 08 2014
WV Department of
Environmental Protection

805461 Workover Procedure

- 1) Safety first! Hold PJSA before all jobs.
- 2) Use slickline unit to verify tools will go to at least 1825'
- 3) Run open hole logs and evaluate to be sure project is economic (Repair road if needed to MIRU OHL unit).
- 4) MIRU Service Rig, run tools to check TD
- 5) Run 4 ½" casing with appropriate float equipment to approximately 1850'
- 6) Cement 4 ½" casing from shoe to approximately 1375', WOC
- 7) Run cement bond log, swab & perforate
- 8) MIRU pumping company and stimulate zone or zones as determined from OHL evaluation
- 9) Flow back well starting with 3/8" choke and increasing size as needed
- 10) Finish clean up, check TD, record final openflow and final rock pressure
- 11) Reclaim and turn in line

RDT
07/07/14

08/08/2014

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STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

Well 805461 WO
API 47-043-00518W
Page 1 of 2

WELL RECORD

Permit No. LIN-518

Oil or Gas Well GAS

(KIND)

Company United Fuel Gas Company
Address Charleston, W. Va.
Farm Huntington Dev. & Gas Co. Acres 17,695.87
Location (waters) Nine Mile Creek
Well No. 5461 Elev. 1,150 B.
District Laurel Hill County Lincoln
The surface of tract is owned in fee by _____
Address _____
Mineral rights are owned by Huntington Dev. & Gas Co.
Address Charleston, W. Va.
Drilling commenced 8-18-44
Drilling completed 12-10-44
Date Shot 12-14-44 From 3204 To 3549
With 3300# Detonite
Open Flow 20 /10ths Water in _____ 2 Inch
_____ /10ths Merc. in _____ Inch
Volume _____ Cu. Ft.
Rock Pressure 185 lbs. 72 hrs.
Oil _____ bbls., 1st 24 hrs.
Fresh water _____ feet _____ feet
Salt water _____ feet _____ feet

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			
13			
10	21	21	Size of
8 1/4	331	331	
6 5/8	1579	1579	Depth set
5 3/16			
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED _____ SIZE _____ No. Ft. _____ Dat _____

COAL WAS ENCOUNTERED AT 108 FEET 48 INCHES
_____ FEET _____ INCHES _____ FEET _____ INCHES
_____ FEET _____ INCHES _____ FEET _____ INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Surface			0	18			
Slate			18	30			
Sand			30	42			
Slate			42	108			
Coal			108	112			
Sand			112	140			
Slate			140	160			
Sand			160	195			
Slate			195	230			
Sand			230	325			
slate			325	375			
Sand			375	400			
Slate			400	435			
Sand			435	455			
Slate & Shells			455	540			
Sand			540	590			
Slate & Shells			590	820			
Sand			820	845			
Slate			845	920			
Salt Sand			920	1008			
Slate			1008	1011			
Sand			1011	1275			
Slate & Shells			1275	1289			
Maxon Sand			1289	1332			
Slate			1332	1335			
Lime Shell			1335	1349			
Slate & Shell			1349	1528			
Little Lime			1528	1554			
Pencil Cave			1554	1558			
Big Lime			1558	1726			
Break			1726	1728			
Injun Sand			1728	1766			
Slate & Shells			1766	2111			
Blue Slate			2111	2310			
Coffee Shale			2310	2323			
Berea Sand			2323	2342			
Slate & Shells			2342	2418			
White Slate			2418	2700			

Gas

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WV Department of Environmental Protection

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
							WV 805461 WD API 47-043-00518 Page 2 of 2
Gray Shale			2700	2770			
White Slate			2770	2837			
Gray Shale			2837	3036			
White Slate			3036	3205			
Brown Shale			3205	3535	Gas	3420, 3480	
White Slate			3535	3550			
Total Depth			3550				

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WV Department of
Environmental Protection
Date: Feb. 10, 194

APPROVED UNITED FUEL GAS COMPANY, Owner
By: *J.A. Cunningham*
(Title) Engineer



4300518W

WW-2A
(Rev. 6-07)

1.) Date: June 19, 2014
2.) Operator's Well Number 605461 WVO API: 47-043-00518
State County Permit
3.) API Well No.: 47- 043 - 00518

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served:

(a) Name Hearthwood Forestland Group ✓
Address C/O Craig Kaderavek, 19045 Stone Mountain Road
Abingdon, VA 24210

(b) Name Lois Adkins ✓
Address 293 Nine Mile Creek
Midcott, WV 25540

(c) Name Bryan and Lisa Stevens ✓
Address P.O. Box 473
Hartman, WV 25523

5) (a) Coal Operator
Name None
Address _____

(b) Coal Owner(s) with Declaration
Name Pocahontas Land Corp.
Address 800 Princeton Avenue ✓
Bluefield, WV 24701

6) Inspector
Name Ralph Triplett
Address 5539 McClellan Highway
Branchland, WV 25506
Telephone 304-389-0350

(c) Coal Lessee with Declaration
Name None
Address _____

TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:

OR
 Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas
 Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through ___ on the above named parties by:

Personal Service (Affidavit attached)
 Certified Mail (Postmarked postal receipt attached)
 Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 and 35 CSR 4, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator Chesapeake Appalachia, L.L.C.
By: [Signature]
Its: Manager - Operations, Appalachia South
Address P.O. Box 18496
Oklahoma City, OK 73154-0496
Telephone 405-935-4073

Subscribed and sworn before me this 30th day of June, 2014

Phyllis A. Copley Notary Public

My Commission Expires September 16, 2018
Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov



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WV Department of Environmental Protection
08/08/2014

Well 805461 WO
 API 47-043-00518 W

7012 3460 0000 4499 2944

**U.S. Postal Service™
 CERTIFIED MAIL™ RECEIPT**
 (Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

HAMLIN WV 25523-0523

Postage	\$ 11.82	0523
Certified Fee	\$ 3.30	01
Return Receipt Fee (Endorsement Required)	\$ 2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$ 0.00	
Total Postage & Fees	\$ 17.82	07/07/2014

Sent To: **805461 WO**
 Bryan and Lisa Stevens
 P.O. Box 473
 Hamlin, WV 25523 ✓

PS Form 3800

7012 3460 0000 4499 2951

**U.S. Postal Service™
 CERTIFIED MAIL™ RECEIPT**
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For delivery information visit our website at www.usps.com

MIDKIFF WV 25540

Postage	\$ 11.82	0523
Certified Fee	\$ 3.30	01
Return Receipt Fee (Endorsement Required)	\$ 2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$ 0.00	
Total Postage & Fees	\$ 17.82	07/07/2014

Sent To: **805461 WO**
 Lois Adkins ✓
 293 Nine Mile Creek
 Midkiff, WV 25540

PS Form 3800

7012 3460 0000 4499 2975

**U.S. Postal Service™
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For delivery information visit our website at www.usps.com

ABINGDON VA 24210

Postage	\$ 11.82	0523
Certified Fee	\$ 3.30	01
Return Receipt Fee (Endorsement Required)	\$ 2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$ 0.00	
Total Postage & Fees	\$ 17.82	07/07/2014

Sent To: **805461 WO**
 Heartwood Forestland Grop ✓
 C/O Craig Kaderavck
 19045 Stone Mountain Road
 Abingdon, VA 24210

PS Form 3800

7012 3460 0000 4499 2968

**U.S. Postal Service™
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BLUEFIELD WV 24701

Postage	\$ 11.82	0523
Certified Fee	\$ 3.30	01
Return Receipt Fee (Endorsement Required)	\$ 2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$ 0.00	
Total Postage & Fees	\$ 17.82	07/07/2014

Sent To: **805461 WO**
 Pocahontas Land Corp. ✓
 800 Princeton Avenue
 Bluefield, WV 24701

PS Form 3800

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 WV Department of
 Environmental Protection

WW-2A Surface Waiver

SURFACE OWNER WAIVER

County 043-Lincoln

Operator
Operator well number

Chesapeake Appalachia, L.L.C.
805461 WO API: 47-043-00518

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW2-A

The well operator named on page WW2A is applying for a permit from the State to do oil or gas well work. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

Time Limits and methods for filing comments. The law requires these materials to be served on or before the date the operator files his Application. You have **FIFTEEN (15) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure a adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Comments must be in writing. Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation..."

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

List of Water Testing Laboratories. The Office maintains a list of water testing laboratories which you can hire to test your water to establish water quality prior to and after drilling. Contact the Chief to obtain a copy.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application for a Well Work Permit on Form WW2-A, and attachments consisting of pages 1 through ___ including a work order on Form WW2-B, a survey plat, and a soil and erosion plan, all for proposed well work on my surface land as described therein.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.
HEARTWOOD FORESTLAND FUND III, L.P.

Signature Date

Company Name By: Heartwood Forestland Advisors III, LLC,
its general partner
By: The Forestland Group, LLC, its Manager
Date

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Office of Oil and Gas

Print Name

Charwood Regent Director
Signature Date 7-10-14

JUL 29 2014

4300578W

WW-2A1
(Rev. 1/11)

Operator's Well Number 805461 WO API: 47-043-00518

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6, Section 8(d)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that -

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
Huntington Gas Development	Chesapeake Appalachia, LLC	1/8	234 / 318

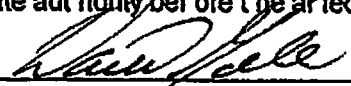
**Acknowledgement of Possible Permitting/Approval
in Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator:
By: Its:



 Chesapeake Appalachia, L.L.C.
 Manager - Operations, Appalachia South

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 WV Department of
 Environmental Protection
 08/08/2014

43 00518 W

WW-9
(5/13)

Page _____ of _____
API Number 47-043 -00518
Operator's Well No. 805461 WVO AP: 47-043-00518

OK# 5165457
\$650⁰⁰

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Chesapeake Appalachia, L.L.C. OP Code 494477557

Watershed (HUC 10) Ninemile Creek of Guyan River Quadrangle Branchland, WV 7.5'

Elevation 1118' County 043-Lincoln District Laurel Hill

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes _____ No X

Will a pit be used for drill cuttings? Yes X No _____

If so, please describe anticipated pit waste: Cement and Frac Water

Will a synthetic liner be used in the pit? Yes X No _____ If so, what ml.? 20 ml

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

Will closed loop system be used? No - not drilling

Drilling medium anticipated for this well? Air, freshwater, oil based, etc.

-If oil based, what type? Synthetic, petroleum, etc.

Additives to be used in drilling medium? _____

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc.

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) _____

-Landfill or offsite name/permit number? _____

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature: [Signature]

Company Official (Typed Name) David Gocke

Company Official Title Manager - Operations, Appalachia South

Subscribed and sworn before me this 30th day of June, 20 14

Phyllis Copley Notary Public

My commission expires 09/16/2018



08/08/2014

4300518W

Form WW-9

Operator's Well Number:
API Well Number:

805461 WO
47 - 043 - 00518

Proposed Revegetation Treatment: Acres Disturbed 1.0 Prevegetation pH 6.1

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) 500 lbs/acre (500 lbs minimum)

Mulch Hay 2 Tons/acre

Seed Mixtures

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
KY 31	40	Orchard Grass	15
Alsike Clover	5	Alsike Clover	5
Annual Rye	15		

Attach:
Drawing(s) of road, location, pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

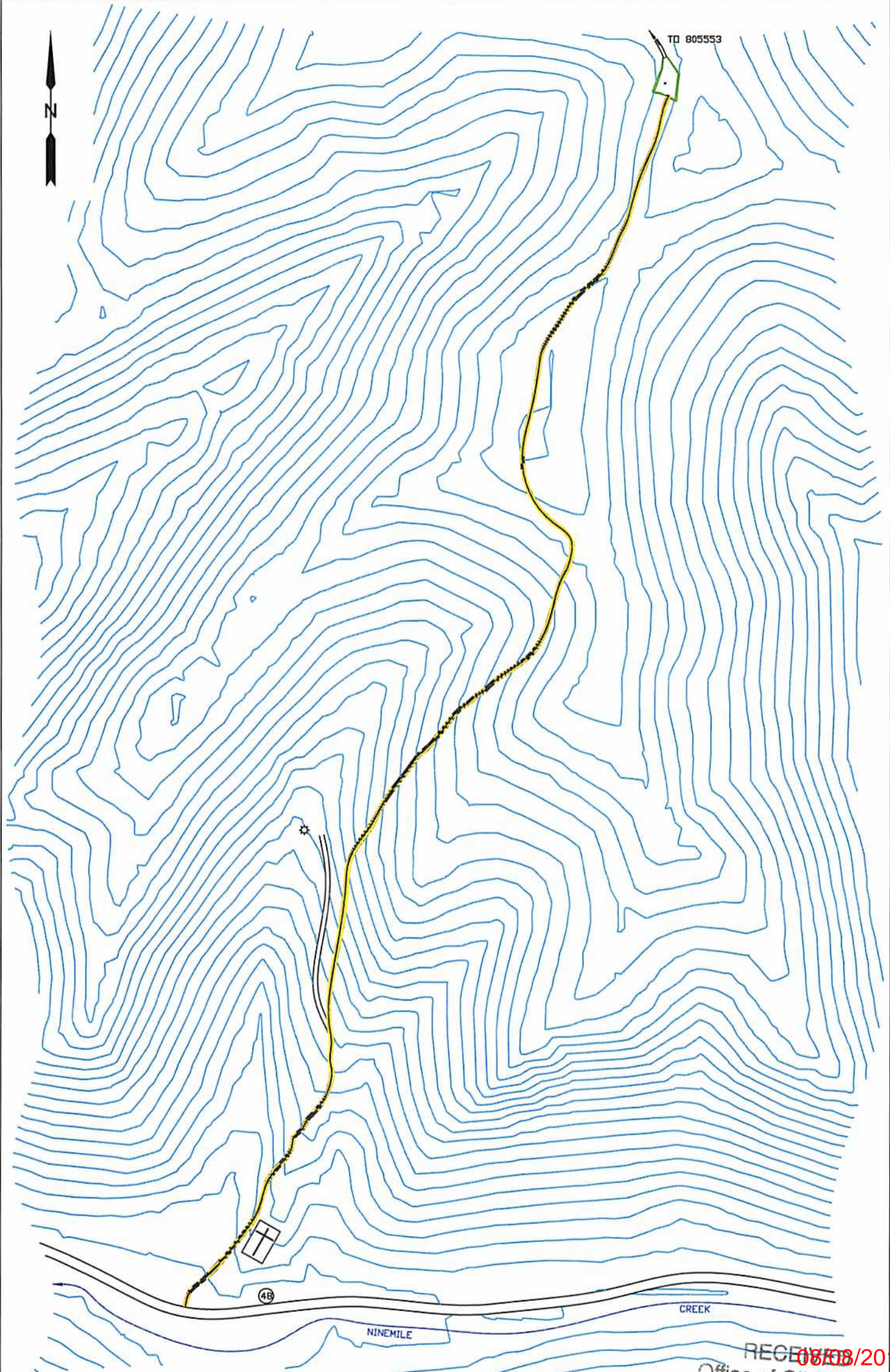
Plan Approved: Royal D. Triplett

Comments:

Title: District Inspector Date: 07/07/14

Field Reviewed? Yes No

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WV Department of
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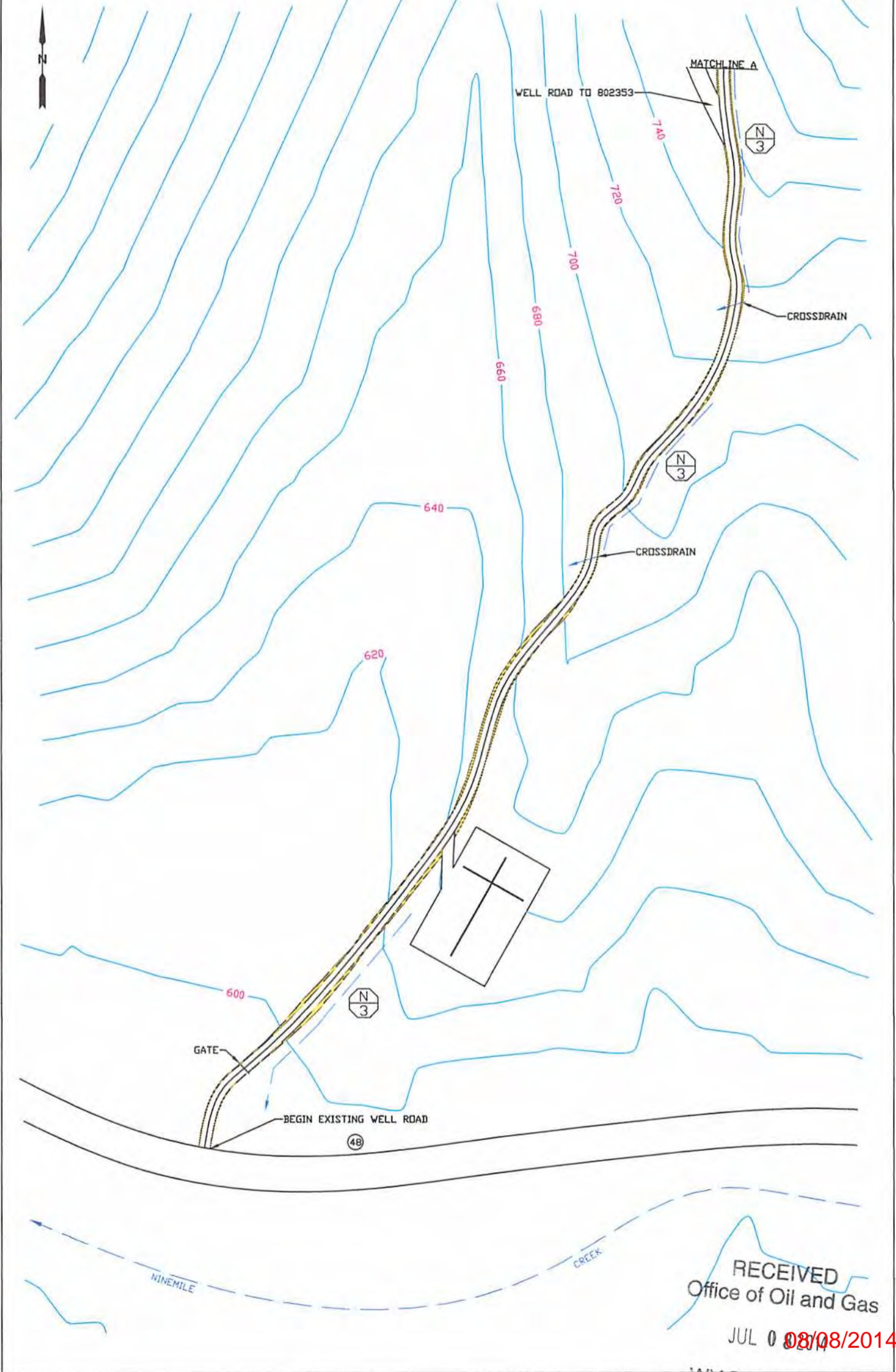
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DISTURBED AREAS	
EXISTING WELL PAD	0.54 AC.
EXISTING ACCESS ROAD	0.16 AC.
ADDITIONAL CLEARING	
TOTAL DISTURBED AREA	0.70 AC

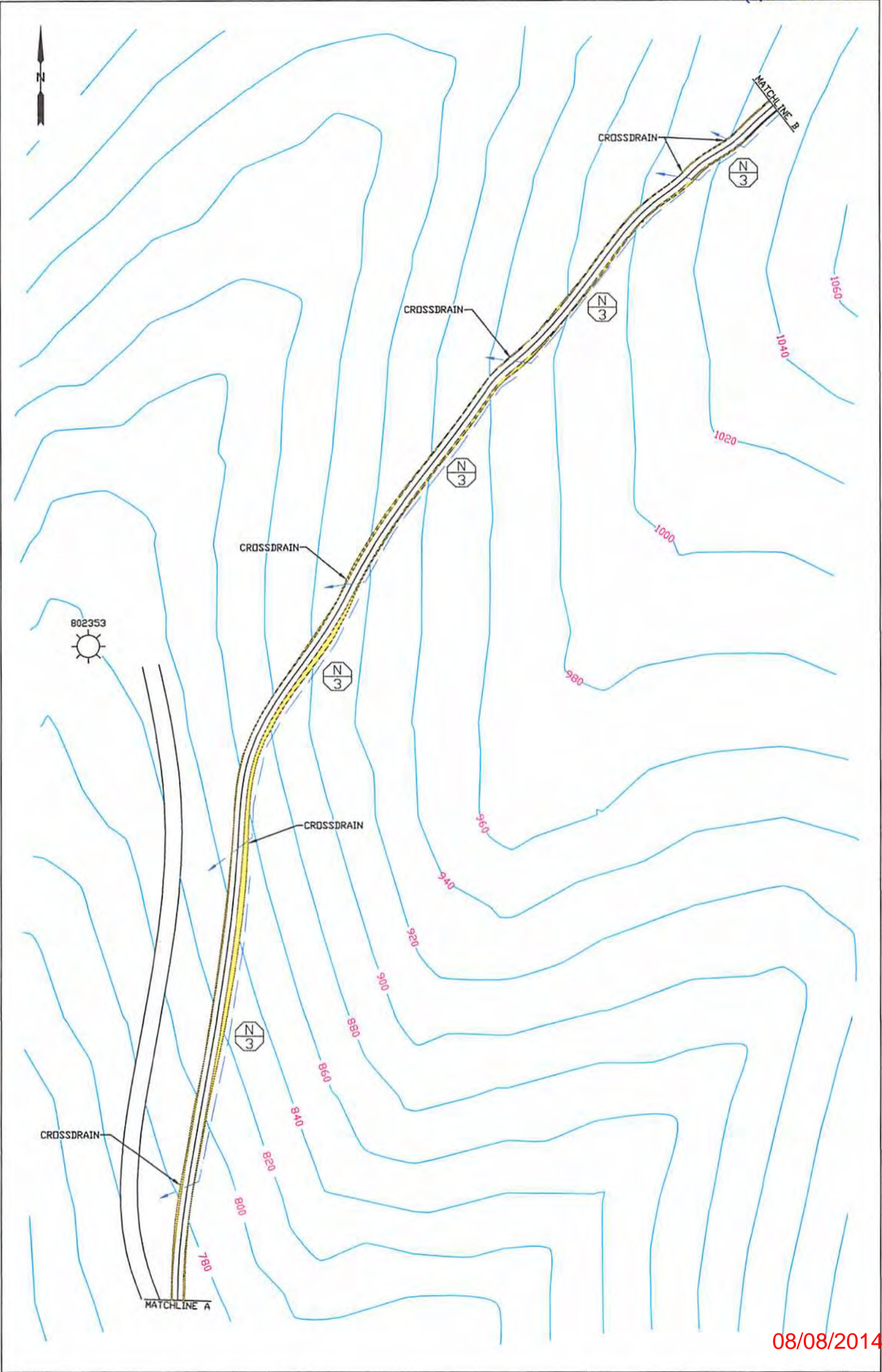
LEGEND	
	STREAM
	PROPERTY LINE
	SLOPE AREA
	WETLAND
	BUFFER AREA

SITE PLAN	
CHESAPEAKE APPALACHIAN LLC PROPOSED WORKOVER OF WELL 805461 LAUREL HILL, DISTRICT, LINCOLN COUNTY BRANCHLAND QUAD, WY 75	
JUNE 17, 2014 TRUE LINE SURVEYING 6211 FAIRVIEW DR. HUNTINGTON, WV 25705	
PAGE 1 OF 1	

Department of Environmental Protection



LEGEND		WV Department of Environmental Protection	
	PROVIDE FLEXTERRA HIGH PERFORMAMCE FLEXABLE GROWTH MEDIUM (HP-FLM) ON CUT AND FILL SLOPES		STREAM
	LEVEL SPREADER		PROPERTY LINE
	DIVERSION DITCH		SLOPE AREA
	BERM OUTLET		WETLAND
			24" COMPOST FILTER SOCK AS REQUIRED
		EROSION AND SEDIMENT CONTROL PLAN	
		CHESAPEAKE APPALACHIA PROPOSED WORKOVER WELL # 805461	
		LAUREL HILL DISTRICT, LINCOLN COUNTY BRANCLANDL QUAD, WV 7.5'	
		JUNE 9, 2014	
		TRUE LINE SURVEYING 6211 FAIRVIEW DR. HUNTINGTON, WV 25705	
		PAGE 1 OF 4	



08/08/2014

LEGEND		EROSION AND SEDIMENT CONTROL PLAN	
	PROVIDE FLEXTERRA HIGH PERFORMNCE FLEXABLE GROWTH MEDIUM (HP-FLM) ON CUT AND FILL SLOPES		STREAM
	LEVEL SPREADER		PROPERTY LINE
	DIVERSION DITCH		SLOPE AREA
	BERM OUTLET		WETLAND
			24" COMPOST FILTER SOCK AS REQUIRED
		CHESAPEAKE APPALACHIA, L.L.C. PROPOSED WORKOVER OF WELL # 805461 LAUREL HILL DISTRICT, LINCOLN COUNTY BRANCHLAND QUAD, WV 7.5'	
		JUNE 9, 2014	
		TRUE LINE SURVEYING 6211 FAIRVIEW DR. HUNTINGTON, WV 25705	
		PAGE 2 OF 4	



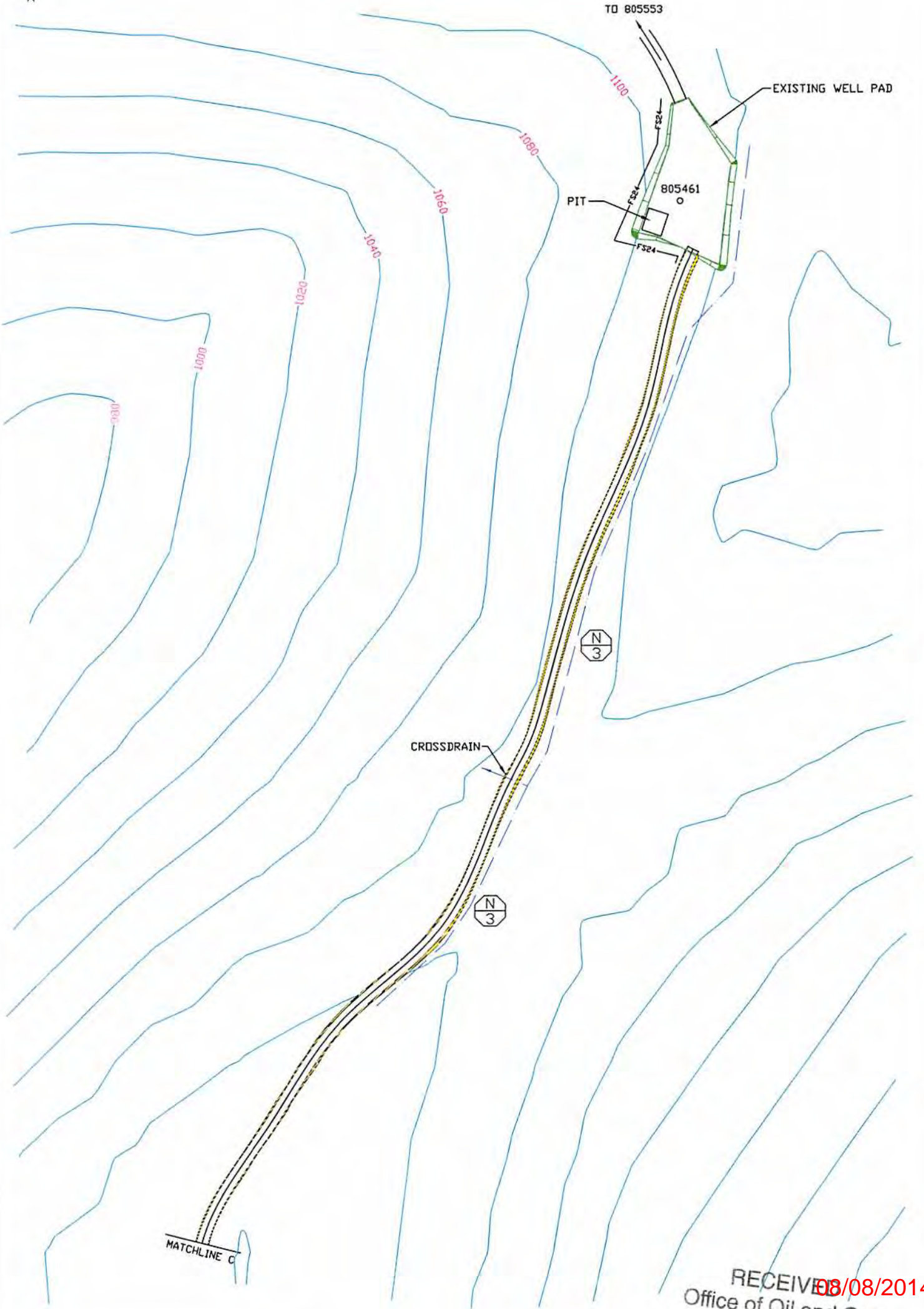
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LEGEND		EROSION AND SEDIMENT CONTROL PLAN	
N 1	PROVIDE FLEXTERRA HIGH PERFORMANCE FLEXABLE GROWTH MEDIUM (HP-FLM) ON CUT AND FILL SLOPES		STREAM
N 2	LEVEL SPREADER		PROPERTY LINE
N 3	DIVERSION DITCH		SLOPE AREA
N 4	BERM OUTLET		WETLAND
			24" COMPOST FILTER SOCK AS REQUIRED
			FS24








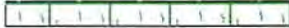
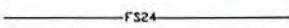
CHESAPEAKE APPALACHIAN L.L.C.
PROPOSED WORKOVER OF WELL # 805461
LAUREL HILL DISTRICT, LINCOLN COUNTY
BRANCHED CREEK, WV 25757
JUNE 9, 2014
TRUE LINE SURVEYING
6211 FAIRVIEW DR.
HUNTINGTON, WV 25705

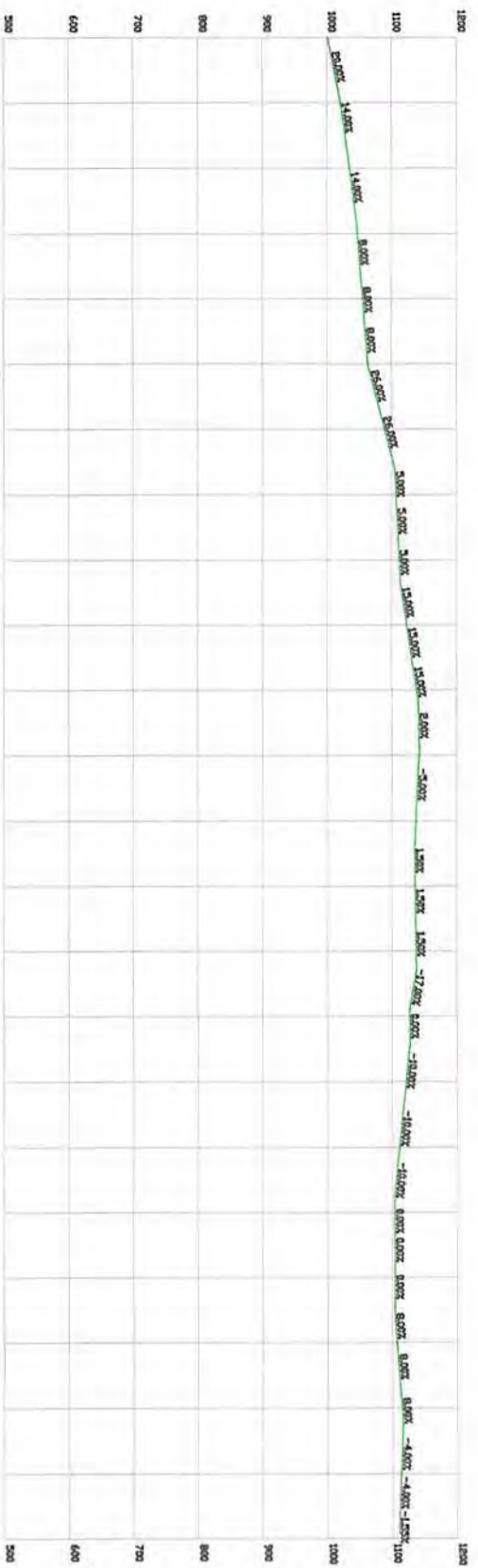
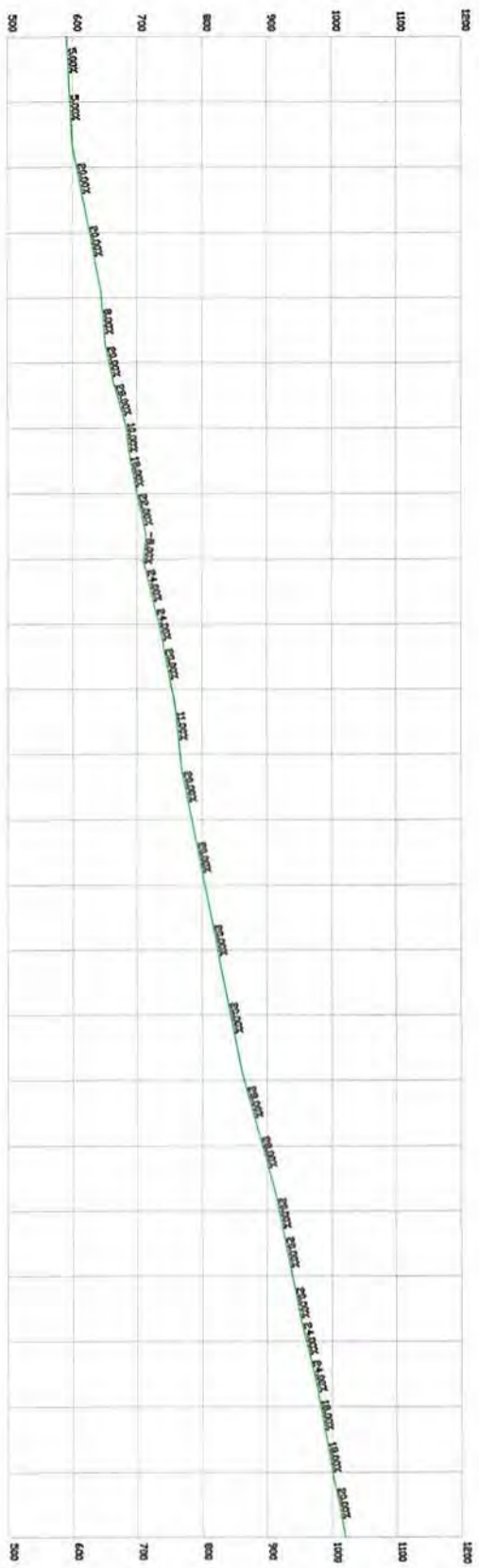
WV Department of Environmental Protection

PAGE 3 OF 4



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LEGEND		EROSION AND SEDIMENT CONTROL PLAN
	PROVIDE FLEXTERRA HIGH PERFORMANCE FLEXIBLE GROWTH MEDIUM (HP-FLM) ON CUT AND FILL SLOPES	CHESAPEAKE APPALACHIA, L.L.C. PROPOSED WORKOVER OF WELL # 805461 FAUREL HILL DISTRICT, LINCOLN COUNTY BRANCHLAND QUAD, WV, 7.5' JUNE 17, 2014 TRUE LINE SURVEYING 6211 FAIRVIEW DR. HUNTINGTON, WV 25705 PAGE 4 OF 4
	LEVEL SPREADER	
	DIVERSION DITCH	
	BERM OUTLET	
	STREAM	Environmental Protection
	PROPERTY LINE	
	SLOPE AREA	
	WETLAND	
	24' COMPOST FILTER SOCK AS REQUIRED	



08/08/2014

ROAD PROFILE

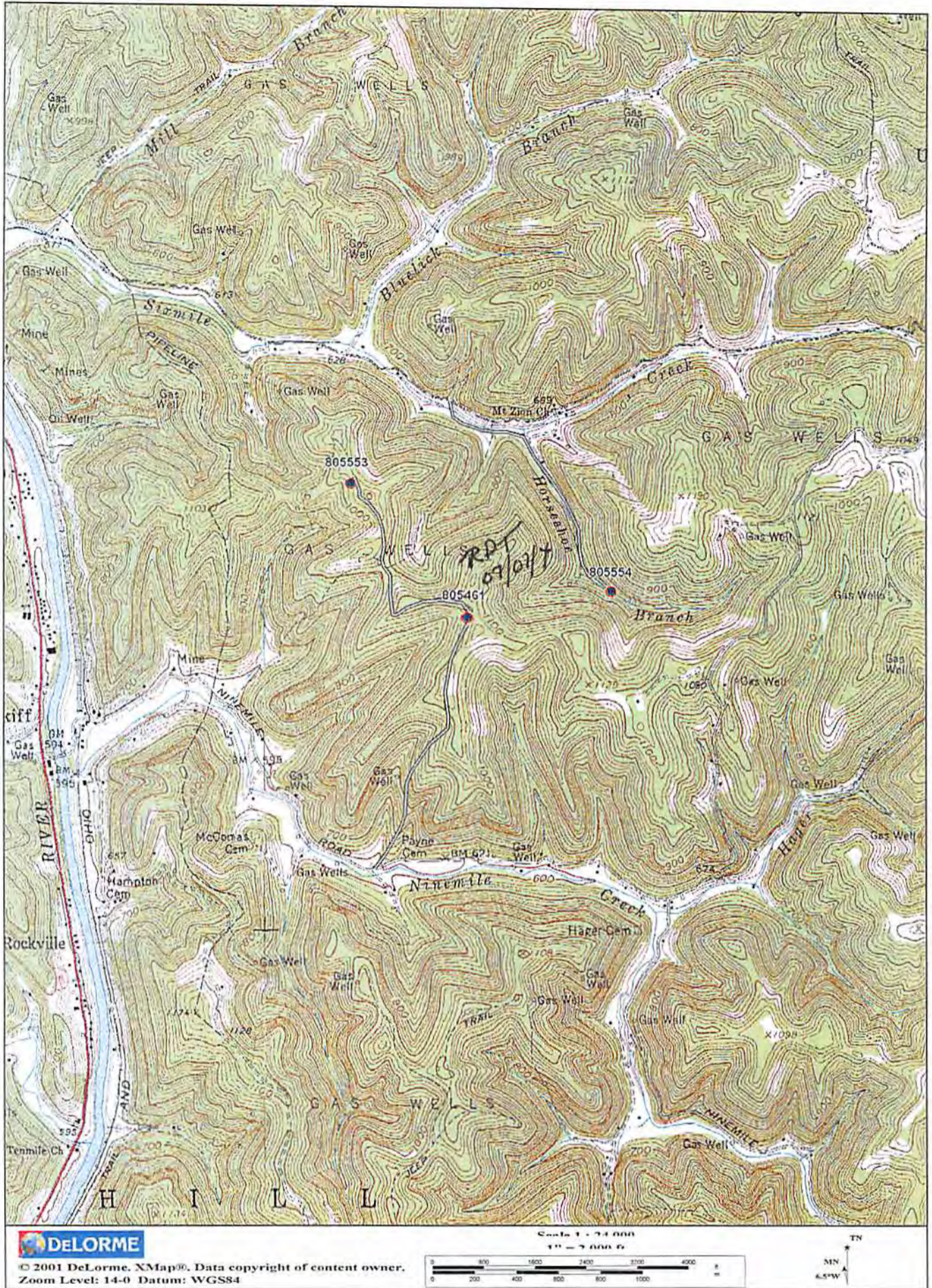
CHESAPEAKE APPALACHIA, L.L.C.
 PROPOSED WORKOVER OF WELL # 805461
 LAUREL HILL DISTRICT, LINCOLN COUNTY
 BRANCHLAND QUAD, WV 75'

JUNE 9, 2014
 TRUE LINE SURVEYING
 6211 FAIRVIEW DR.
 HUNTINGTON, WV 25705

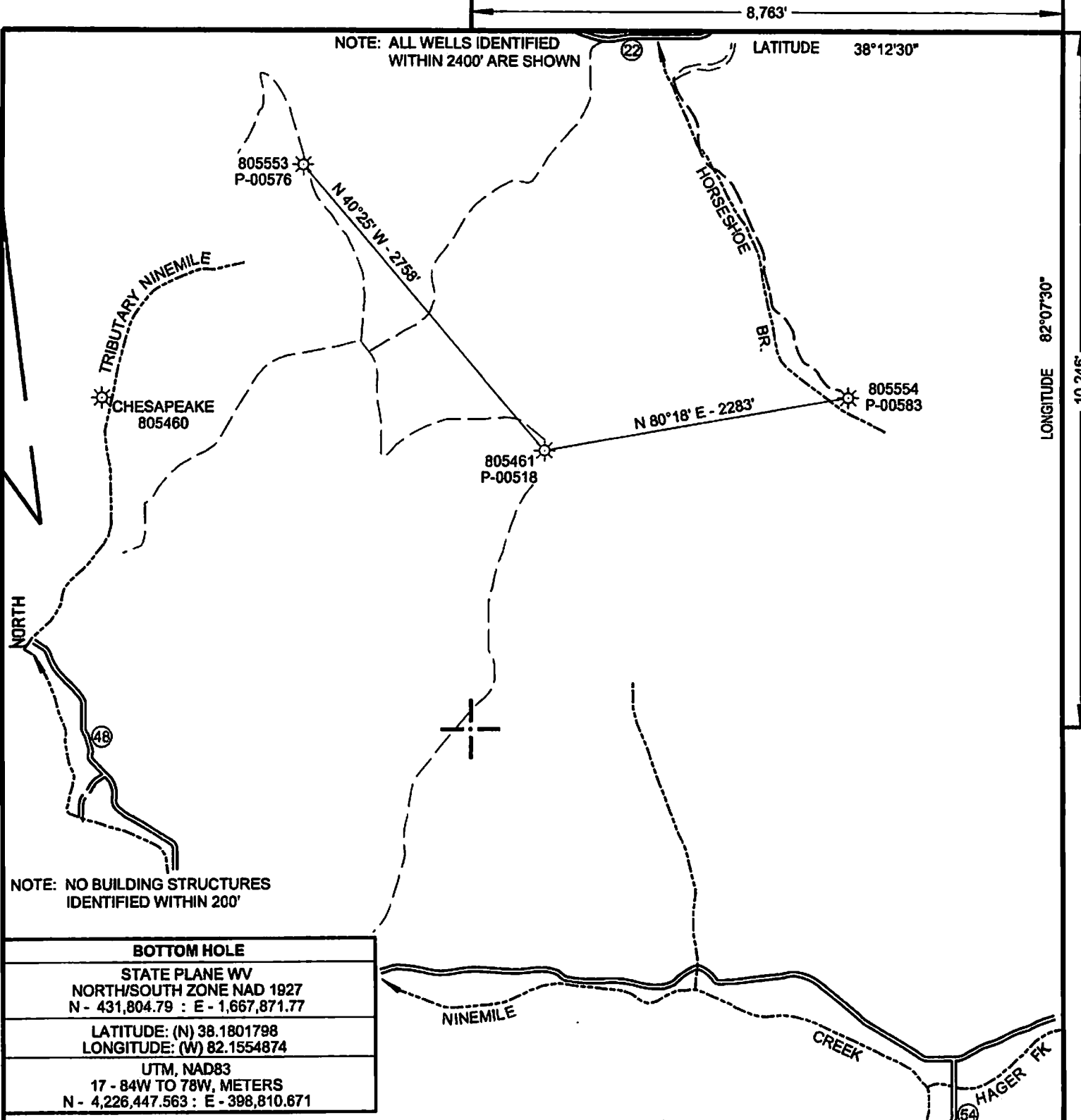


Well 805461

API 47-043-00518



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Office of Oil and Gas
JUL 08 2014
WV Department of
Environmental Protection



BOTTOM HOLE
STATE PLANE WV NORTH/SOUTH ZONE NAD 1927 N - 431,804.79 : E - 1,667,871.77
LATITUDE: (N) 38.1801798 LONGITUDE: (W) 82.1554874
UTM, NAD83 17 - 84W TO 78W, METERS N - 4,226,447.563 : E - 398,810.871

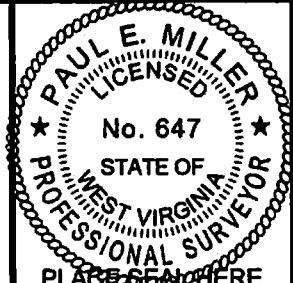
(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO.	805461WO.DGN
DRAWING NO.	5461 WO
SCALE	1" = 1000'
MINIMUM DEGREE OF ACCURACY	1:200
PROVEN SOURCE OF ELEVATION	MAPPING GRADE GPS

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

(SIGNED) *Paul E. Miller*

R.P.E. _____ L.L.S. 647



STATE OF WEST VIRGINIA DIVISION OF ENVIRONMENTAL PROTECTION OIL AND GAS DIVISION		DATE <u>MAY 12</u> , 20 <u>14</u> OPERATOR'S WELL NO. <u>805461</u> API WELL NO. <u>47</u> <u>043</u> <u>00518 W</u> STATE COUNTY PERMIT
WELL TYPE: OIL ___ GAS <u>X</u> LIQUID INJECTION ___ WASTE DISPOSAL ___ (IF "GAS,") PRODUCTION <u>X</u> STORAGE ___ DEEP ___ SHALLOW <u>X</u>		
LOCATION: ELEVATION <u>1118'</u> WATER SHED <u>NINEMILE CREEK OF GUYAN RIVER</u> DISTRICT <u>LAUREL HILL</u> COUNTY <u>LINCOLN</u> QUADRANGLE <u>BRANCHALAND, WV 7.5'</u>		COUNTY NAME
SURFACE OWNER <u>HEARTWOOD FORESTLAND</u> ACREAGE <u>-</u> OIL & GAS ROYALTY OWNER <u>CHESAPEAKE APPALACHIA, L.L.C.</u> LEASE ACREAGE <u>-</u> LEASE NO. <u>-</u> FEE LAND (GAS) <u>-</u>		PERMIT <u>08/08/2014</u>
PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____ WORKOVER _____		
PLUG AND ABANDON ___ CLEAN OUT AND REPLUG _____ TARGET FORMATION _____ ESTIMATED DEPTH _____ WELL OPERATOR <u>CHESAPEAKE APPALACHIA, L.L.C.</u> DESIGNATED AGENT <u>ERIC B. GILLISPIE</u> ADDRESS <u>PO BOX 18496 OKLAHOMA CITY, OK 73154-0496</u> ADDRESS <u>PO BOX 8070 CHARLESTON, WV 25362</u>		

FORM WW-6